

Amendments to the Claims:

1. (Currently Amended) A process of producing transgenic plants or plant cells stably transformed on a chromosome with a DNA sequence of interest, said plants or plant cells being and capable of expressing a function protein of interest from said DNA sequence of interest, said process comprising

(a) providing ~~a plant cells~~ cell or a cell of a plants plant with at least two different vectors in one step, whereby

(i) said at least two different vectors are adapted to recombine with each other by site-specific recombination in said plant cells for producing a non-replicating recombination product containing said DNA sequence of interest,

(ii) said at least two different vectors are adapted for integrating said DNA sequence of interest into said chromosome,

(iii) said DNA sequence of interest contains sequence portions from ~~at least two of~~ said at least two different vectors, said sequence portions being necessary for expressing said function protein of interest from said DNA sequence of interest; and

(b) selecting plants or plant cells expressing said function protein of interest.

2. (Original) The process of claim 1, wherein said at least two vectors are provided to said plant cells by Agrobacterium-mediated delivery.

3. (Original) The process of claim 2, wherein each of said at least two different vectors is provided by a different Agrobacterium cell or strain.

4. (Previously Presented) The process of claim 1, wherein one or all of said at least two different vectors contain(s) a functional cytokinin autonomy gene whereas said DNA sequence of interest is devoid of a functional cytokinin autonomy gene.

5. (Original) The process of claim 1, wherein said at least two vectors are provided to said plant cells by direct nucleic acid transfer.

6. (Previously Presented) The process of claim 1, wherein step (a) comprises providing a site-specific recombinase specific for recombination sites on said at least two different vectors.

7. (Original) The process of claim 6, wherein said site-specific recombinase is provided by including an expressible sequence coding for said recombinase on a vector of said at least two different vectors.

8. (Original) The process of claim 7, wherein expressibility of said sequence coding for said recombinase is destroyed by said site-specific recombination.

9. (Previously Presented) The process of claim 1, wherein said chromosome is selected from the following group: a nuclear chromosome, a plastid chromosome, or a mitochondrial chromosome.

10. (Previously Presented) The process of claim 1, wherein said at least two different vectors are adapted such that said DNA sequence of interest has T-DNA border sequences that facilitate integration of said DNA sequence of interest into said chromosome.

11. (Previously Presented) The process of one of claim 1, wherein said at least two different vectors are adapted such that said DNA sequence of interest contains homology sequences that facilitate integration of said DNA sequence of interest into said chromosome by homologous recombination.

12. (Previously Presented) The process of claim 1, wherein said at least two different vectors are adapted for introducing said DNA sequence of interest into said chromosome by site-specific integration.

13. (Previously Presented) The process of claim 1, wherein step (b) comprises screening for plants or plant cells having said DNA sequence of interest integrated in said chromosome.

14. (Previously Presented) The process of claim 1, wherein step (b) comprises screening for cells or plants in which said site-specific recombination between said at least two vectors has occurred.

15. (Previously Presented) The process of claim 1, wherein said at least two different vectors are adapted such that said DNA sequence of interest contains a selectable marker gene or a sequence that allows in step (b) screening for transformed plants or plant cells containing said DNA sequence of interest.

16. (Currently Amended) The process of claim 1, wherein a sequence portion of one of said at least two different vectors contains a selectable marker under translational control of an internal ribosome entry site (IRES) element[[]].

17. (Original) The process of claim 16, wherein said selectable marker cannot be transcribed in said plant cells from one of said at least two different vectors but is placed by said site-specific recombination under the control of genetic elements allowing transcription of said selectable marker.

18. (Currently Amended) The process of claim 1, wherein step (b) comprises screening for the absence of said at least two different vectors ~~and/or recombination products thereof with the exception of recombination products containing said DNA sequence of interest.~~

19. (Currently Amended) The process of claim 18, wherein  
~~\_\_\_\_\_ (a) \_\_\_\_\_ at least one of said at least two different vectors or~~  
~~\_\_\_\_\_ (b) \_\_\_\_\_ recombination products of said site-specific recombination that do not~~  
contain said DNA sequence of interest  
contain a counter-selectable marker gene or another sequence that allows screening against  
transformed cells containing said vectors ~~as defined in (a) or said recombination products as~~  
~~defined in (b).~~

20. (Original) The process of claim 19, wherein said counter-selectable marker gene  
or said another sequence that allows screening against transformed cells containing said vectors  
is under translational control of an internal ribosome entry site (IRES) element.

21. (Currently Amended) The process of claim 1, wherein said expression of said  
~~function~~ protein of interest from said DNA sequence of interest comprises intron-mediated cis-  
splicing.

22. (Currently Amended) The process of claim 21, wherein
- a first vector of said at least two different vectors contains a first sequence portion  
that contains:
    - a first part of a sequence coding for the ~~function~~ protein to be expressed  
and, downstream thereof, a 5' part of an intron, and
  - a second vector of said at least two different vectors contains a second sequence  
portion that contains:
    - a second part of a sequence coding for ~~a function~~ the protein to be  
expressed and, upstream thereof, a 3' part of an intron.

23. (Currently Amended) The process of claim 1, wherein three or more different  
vectors are provided to said plant cell or cell of a plant cells in step (a) and two or more different

transgenic plants or plant cells are produced, said different transgenic plants or plant cells having different DNA sequences of interest integrated in a chromosome.

24. (Currently Amended) The process of claim 1, wherein said plant cells are provided with two different vectors, and said DNA sequence of interest contains a sequence portion ~~of~~ from each of these two vectors.

25. (Currently Amended) The process of claim 1, comprising the following steps (A) and (B):

- (A) providing plants or plant cells with a mixture of
- (i) a set of m primary vectors each having a primary sequence portion selected from the set  $[(\text{[]})a_1, a_2, \dots, a_m[\text{D}]]$  and
  - (ii) a set of n secondary vectors each having a secondary sequence portion selected from the set  $[(\text{[]})b_1, b_2, \dots, b_n[\text{D}]]$ ,
- whereby
- m and n are independent of each other and both are integers of  $>1$ , said primary vectors and said secondary vectors are adapted such that each member of said set of primary vectors can recombine with every member of said set of n secondary vectors by site-specific recombination for producing recombination products containing different DNA sequences of interest, each DNA sequence of interest comprises a member of said set of primary sequence portions and a member of said set of secondary sequence portions, both said sequence portion members are necessary for expressing said ~~function~~ protein of interest from said DNA sequence of interest,
- said primary vectors and said secondary vectors are adapted to integrate said DNA sequences of interest into a chromosome,
- (B) selecting transformed plants or plants cells expressing a ~~function~~ said protein of interest from a DNA sequence of interest.

26. (Currently Amended) The process of claim 1, comprising the following steps (A) and (B):

(A) providing plants or plant cells with a mixture of

(i) a primary vector having a primary sequence portion  $a_1$  and

(ii) a set of  $n$  secondary vectors each having a secondary sequence portion

selected from the set  $\{[(\text{I})]b_1, b_2, \dots, b_n[D]\}$ ,

whereby

$n$  is an integer of  $>1$ ,

said primary sequence portion  $a_1$  is necessary for expressing the function of a secondary sequence portion  $\{[(\text{I})]b_1, b_2, \dots, b_n[D]\}$ ,

said primary vector and said secondary vectors are adapted such that said primary vector can recombine with every member of said set of  $n$  secondary vectors by site-specific recombination for producing recombination products containing different DNA sequences of interest of the type  $\{[(\text{I})]a_1b_1, a_1b_2, \dots, a_1b_n[D]\}$  or the type  $\{[(\text{I})]b_1a_1, b_2a_1, \dots, b_na_1[D]\}$ ,

said primary vector and said secondary vectors are adapted to integrate said DNA sequences of type  $\{[(\text{I})]a_1b_1, a_1b_2, \dots, a_1b_n[D]\}$  or type  $\{[(\text{I})]b_1a_1, b_2a_1, \dots, b_na_1[D]\}$  into a chromosome,

(B) selecting transformed plants or plants cells expressing a ~~function~~ protein of interest from a DNA sequence of interest.

27. (Currently amended) The process of claim 25, further comprising determining a phenotypic feature of a transformed plant or plant cell selected in step (B) due to a ~~function of~~ protein encoded by

a primary sequence portion and/or

a secondary sequence portion and/or

a combination of a primary sequence portion and a secondary sequence portion.

28-33. (Cancelled)

34. The process of claim 1, wherein said plant cell or a cell of a plant is provided with a mixture of said at least two different vectors.